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ARMY FAMILY HEALTH SEEKING BEHAVIOR AND SATISFACTION

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ANNUAL REPORT

OTTO VON MERING

AUGUST 20, 1990

Supported by

U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND  
Fort Detrick, Frederick, Maryland 21702-5012

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## **ANNUAL IN-PROCESS REVIEW**

**PROJECT #DAMD 17-87-C-7132  
08/20/90**

### **OVERVIEW OF RESEARCH ACTIVITIES FOR 8/15/89 - 8/20/90**

#### **A. PHASE I: Client Interview Survey**

##### **A-1. Report of Analysis of Pre-Coded Items from Closed-ended Client Interview Data**

Statistical analysis of the pre-coded questions from the in-person interviews with active duty soldiers and family members was completed in Winter 1989-90. This analysis indicates three central findings. First, respondents' reports of the quality of the encounter between patient and provider vary systematically by clinic location, indicating differences in clinic organization and patient "handling" that can provide models of effective and ineffective clinic organization.

Second, the best predictor of attitude toward military medicine is the respondent's report of past experiences in clinics. Reports of positive clinic experiences produce satisfaction with health care within individual clinics. The pre-coded data do not provide much insight into the individual orientations and situational factors that lead to positive clinic experiences, and we will use the qualitative project data to understand this finding better.

The third finding indicates that lower-enlisted dependents evaluate military health care highly, compared to the civilian care that would be available to them. Any changes in the structure of military medicine focused on encouraging use of civilian facilities should take this sub-population into account.

##### **A-2. Qualitative Coding of the Open-ended Client Interview**

Coding of the open ended responses for 29 questions on the 301 client interviews was completed on July 27, 1990. Coding was completed by 10 coders working in pairs. For approximately three to four months there were at least two coding pairs working eight hours a day. The following summaries detail the activities which were prerequisite to this content analysis procedure.

#### **A-2a. Interview Response Transcription and Uploading**

The interview responses which had been transcribed in Wordstar 5 were put into ASCII delimited format and uploaded to R-base. This procedure was necessary in order to sort and print the responses by interview number and render them in an appropriate form for coding. This was accomplished by April 1990.

We had anticipated an earlier completion date (see Second Annual Report 1989) but due to several difficulties concerning the transfer of the responses from Wordstar 5 to ASCII and then a lengthy sorting procedure in R-base the completion was several months delayed.

#### **A-2b. Procedural Manual for the Qualitative Coding of the Open-ended Client Interview Questions**

The procedural manual, which includes detailed instructions for the coding procedure as well as the dictionary of terms and content categories, was completed in January 1991. This manual was used to train the coders as well as a guide during the coding process of 29 questions for the 801 interviews. Specifically, the manual discusses which of the four themes (Self/Not-Self Care, Limitation and Opportunities in Treatment and Service, Perceived Inequalities in Care and Access to Care, and Support and Non-Support of the Army Family) are used to code each question and how to use values 0, 1, and 2 which indicate the positive or negative tone of a response.

Please note that the completion of the manual required many editorial changes in order to accomodate the many adjustments to the content categories, database, and coding procedure that occurred throughout the year

#### **A-2c. Database Management System Manual**

The Database Management System Manual was written as a guide for the computer programmer, data manager, and coders of the qualitative data. Included in the manual is a full description of the structure of the database and data entry screen formats, how they were constructed and how to maintain them. The database management system was constructed using R-base, which allowed us to construct custom designed data entry screens for each individual question. The construction of the database and screen formats was accomplished between September 1989 and January 1990.

**A-2d. Report on Coder Training, Pre-testing, Reliability and Quality Control**

As is recommended by Krippendorff (1981), the qualitative coding team spent approximately two months on coder training and pre-testing of the thematic categories as they are presented in the Coding Manual. During this period (January 22, 1990 thru April 1990) final revisions were made to the thematic categories. Then, before actual coding began, a standard reliability test (see Krippendorff 1981) was run to check the validity of the coding procedure and agreement among the coding pairs. The total average reliability of the 10 teams of coders in three groups was determined to be 90% agreement. This final reliability figure was determined after several quality control measures were taken.

**A-3. Report on Plans for Merging Quantitative and Qualitative Client Interview Data Sets and Statistical Analysis: A Brief In-Process Report**

Plans for the cleaning of the qualitative data set are underway. Upon completion of preliminary cleaning, the data set will be put into ASCII format and loaded to SAS where it will be further cleaned and merged with the quantitative dataset and statistically analyzed. It is anticipated that the cleaning and uploading of the dataset to SAS will take approximately two months. A Data Management and Analysis Guidelines Manual has been prepared which outlines the mechanical details of these procedures.

After the data are uploaded, cleaned, and merged with the quantitative dataset, analysis will begin using logistic regression as the statistical tool. Although we will pursue new relationships that emerge after frequencies and initial analyses are run, we expect the analysis of the qualitative data will focus on two issues: (1) role of the clinic experience in producing satisfaction (2) differences in clients' attitude toward military medicine and their willingness to re-enlist.

## **B. Phase II - Provider Interview Survey**

### **B-1. Completion of Coding the Closed-ended Interview Questions and Preliminary Quantitative Analysis**

The coding of the provider interviews was completed on January 3, 1990 (n=199). Since then, the data have been uploaded to the mainframe and have been "cleaned" of all invalid or incorrect data. The "cleaning" procedure involved running frequencies and cross-tabulations to check for incorrect or invalid key punches and non-ASCII characters. At this time all the cleaning is complete and frequency counts for each variable are available. See Document #8 for this report and a table showing the number of primary health care providers and clinic support staff interviewed in each clinic.

### **B-2. Projected Plans for Continued Analysis of Closed-Ended and Open-ended Interview Responses**

In the Fall 1990 a new research member will join the WRAIR/UF team and will be primarily responsible for the analysis of the provider interview data. She will be consulting with Otto von Mering, P.I. and John Henretta, Co-P.I. as well as SAS consultants. Moreover, she will be teaming up with Lois Randolph, the WRAIR documentary analyst who specializes in provider and management issues, in order to frame pertinent research questions for her analysis.

## **C. Phase III - Content Analysis of Documents and Media Reports**

### **C-1. Summary Statement of Purpose**

Specific materials used in the documentary analysis are listed. The relationship between the documentary analysis and the overall research project design is explained.

### **C-2. Present Status of Documentary Analysis**

The present status of the content analysis of Army health care documentary materials is summarized. These materials include Army health related articles in the Army Times and the Mercury, WACH committee meeting notes, an internal WACH survey on staff perception and satisfaction, research bibliographical materials, and summaries of research reports on Army health care. A report on self-monitoring systems within the WACH is also included. Background material on the process involved in the selection of the WACH committees chosen for analysis is also presented.

### **C-3. A Formal Secondary Interpretive Assessment of a MEDDAC-Sponsored and Administered Survey**

In the Summer of 1989 Otto von Mering and the WRAIR/UF research group were asked by the MEDDAC Commander at WACH Ft. Stewart to give an interpretive assessment of a MEDDAC-sponsored and administered survey examining health care provider perception and satisfaction. This document reviews the background information and presents the results of this assessment.

### **C-4. Analysis of Army Times Health Related Articles**

The WRAIR/UF research group has been analyzing health related articles appearing in the Army Times since June 1987. The present report continues the analysis from June, 1988 thru May, 1990. Categorical groupings and thematic concerns are listed. Appended tables show the numbers of articles appearing by thematic category.

### **C-5. Report on WRAIR/UF Research Bibliography**

The WRAIR/UF research group has compiled an extensive bibliography on Army health care and related issues. This report is an update on the bibliography thru June, 1990.

### **C-6. WRAIR Training Papers**

Reports are written to acquaint the research group with specific issues related to various aspects of Army health care. Also, a list of frequently used acronyms in the Army health care system was circulated among members of the research team.

### **C-7. Information of Self-Monitoring Evaluation Systems within WINN Army Community Hospital**

A site visit to Ft. Stewart was planned to obtain information on self-monitoring and evaluation systems within WINN Army Community Hospital. Respondents were interviewed and information was gathered regarding: 1) quality assurance; 2) internal audit/review 3) nursing; 4) patient representation. These reports include: 1) information pertaining to the natural history of the patterning of current operations; 2) the particular operational criteria used in self-monitoring; 3) the operational structure and how it is implemented.

**C-8. Comments on Educational Needs Within WINN Army Community Hospital As Documented by the JCAHO Survey Report**

JCAHO evaluated WACH, Ft. Stewart in the Fall of 1989. Overall, the review was excellent. The summary of the JCAHO comments pertain to educational needs within the hospital.

**C-9. A Preliminary Analysis of the WACH Health Consumer Committee and Hospital Advisory Committee Advisory Committee Meeting Notes**

This preliminary analysis of the WACH Health Care Consumer and Hospital Advisory Committee meeting notes examines: 1) The purpose and function of each committee; 2) the leadership/membership relations within the committee; 3) the changes in leadership over time and the changes in leadership style; 4) the role of the media in the dissemination of information gathered during the meetings; 5) the major health care issues addressed; 6) the avenues of care and levels of control within the Army health care system; 7) specific health care concerns addressed; 8) a list of proposals and suggestions formulated by the committees and a review of their accomplishments.

**D. Phase IV - Mail Survey**

There are now three distinct phases of the mail survey distribution in the Ft. Stewart catchment area:

First, a total of 2,347 surveys were distributed in 5/90 to active duty personnel, retirees, and family members using the DEERs-eligible list to systematically select a 7.38% sample.

Second, a total of 1,878 surveys were distributed approximately three months later to active duty enlisted personnel and officers using SIDPERS to draw a systematic 10.2% sample.

Third, a 5% systematic sample (n=1,925) of the DENTAC active duty (officer and enlisted) client population was distributed in June and July, 1990. In consultation with Dr. Marlowe, these latter two SIDPERS and DENTAC mailings were added in order to augment the incompleteness of the military DEERs database from which the original sample was drawn.

The summaries on the next page provide specific details of the above activities.



#### **D-1. Mail Survey Instrument Completion and Pre-testing**

The construction of the mail survey instrument was completed in January, 1990.

Many of the questions used in the instrument were derived from the provider and client questionnaires as well as from the themes appearing in the qualitative client interview data. In early December, the instrument was pre-tested by 21 health care administrators and providers and approximately 20 clients at the WINN Army Community Hospital. At this time, we formally informed WACH administrators of the purpose and goals of the mail survey distribution.

#### **D-2. Acquisition of the DEERS List and Survey Distribution**

Acquisition of the DEERS list was formally initiated on December 5, 1989 when Barbara Hendry and Susannah Neal met with Mstr. Sgt. Carwise at Ft. Stewart. On January 25, 1990 the UF team was informed that the sample had been drawn by Lt.Col. Calahan in Texas and forwarded to Ft. Stewart but that Dr. Marlowe would have to FAX authorization directly to Col. Hood and Gen. Taylor at Ft. Stewart.

On January 29 the authorization was received at Ft. Stewart. After a delay in mailing the tape from Ft. Stewart, it was sent to WRAIR on February 21, 1990. WRAIR then printed the addresses on the tape onto three sets of mailing labels and forwarded them to UF. The three sets of mailing labels were sent from WRAIR to UF on April 2, 1990. The many details of preparing the surveys for mailing began immediately.

Following the Dillman technique, surveys were distributed in a first mailing, then a reminder card was sent three weeks later, and a second mailing of the survey was made three weeks after that. In order properly to announce the survey and encourage a high rate of return, the research team contacted the post newspaper, The Patriot, which ran several times an article explaining the mail survey and Col. Hood's endorsement.

On May 1, 1990 a total of 2,347 surveys were mailed using all the mailing labels received from WRAIR (see Document #22). However, 315 of these addresses were outdated or outside the catchment area and were returned to us by the Ft. Stewart post office. A reminder card was sent to all valid addresses three weeks later, on May 24. Then, a second mailing of the survey was made on June 4 to everyone who had not yet returned a completed survey and had a valid address (n=1,427). To-date a total of 791 completed surveys have been returned.

As of this date, a total of 791 returned surveys represents a 39% return rate. Of these 791 surveys, 364 have been returned from Ft. Stewart active duty (officer and enlisted) and their family members (a 36% return rate), 112 from Hunter active duty and family members (a 29.8% return rate), and 314 from retirees in the total catchment area (a 49.2% return rate).

Further demographic, status, and rank information will be available after the surveys are coded and analyzed.

**D-3. Acquisition of SIDPERS List and Survey Distribution  
As it Is Affected by Troop Deployment to  
Saudi Arabia**

Acquisition of the SIDPERS list and systematic sample was formally initiated on 5/29/90 when Julie Netzer contacted various personnel at Ft. Stewart who have access to this list. She was informed that authorization from WRAIR would be required. A memo highlighting the requirements was FAX'd to David Marlowe at WRAIR on 5/29/90. The authorization was received at Ft. Stewart on 5/30/90.

After a delay in receiving the authorization at the proper office at Ft. Stewart, the list generation began on 6/4/90. As with the DEERS sample, the systematic SIDPERS sample was drawn by selecting every fourth name off the list ordered by the last four numbers of the social security number. Then, according to procedure established by WRAIR, a tape of the list was forwarded to WRAIR and WRAIR forwarded two sets of labels to UF during the week of 6/18/90.

Following Dillman technique, surveys were distributed in a first mailing. On 7/30/90 a total of 1,878 pre-sorted surveys were taken to Ft. Stewart. 1,487 of the surveys went to Ft. Stewart officer and enlisted active duty personnel and 391 went to Hunter AAF officer and enlisted active duty personnel.

On 8/8/90, American troops were deployed to Saudi Arabia. This is believed to affect a considerable number of personnel stationed in the Ft. Stewart/Hunter catchment area which, in turn, may have an effect on the survey response rate. Thus, we will be postponing the mailing of the reminder card and the second mailing until mid-September. Moreover, we are placing a special code on all surveys returned after 8/8 so that we may monitor the post-deployment response rate as well as differences in response content.

Thus far, a total of 147 surveys have been received that were postmarked 7/30/90 to 8/7/90. Of these, 133 came from Ft. Stewart and 14 came from Hunter AAF. For those postmarked 8/8 or later, 99 surveys have been received. In sum, a total of 246 surveys have been returned at a response rate of 13.1%.

#### **D-4. Survey Distribution to DENTAC I, II, III, IV Clinics**

In order to augment the original mailing of surveys using the DEERS list, the UF team is distributing surveys to 5% of non-medical active duty officer and enlisted DENTAC clients in the Ft. Stewart catchment area. A total of 1,925 surveys have been distributed to the clinics on June 4 and July 30. Clinic personnel will give a form to every second appointment client. To date, a total of 99 surveys have been returned, representing a 5.1% return rate.

#### **D-5. Mail Survey Code Book and Coding Schedule**

To review the completed code book and directions for coding. The code book was pre-tested the first week of August, 1990 and training using the coding procedure is underway. It is expected that coding of the mail surveys will be an on-going responsibility of all research team members during the Fall 1990 for no more than 50% of any one individual's total working hours. In this way, coding will be completed in late Fall 1990 while analysis of the other data sets is underway.

#### **E. Special Reports and Presentations**

##### **E-1. In-Process Quarterly Report and WRAIR/UF Research Staff Meeting with Dr. David Marlowe**

Documents in this report include presentations which were given by individual team members to Dr. David Marlowe during his visit to UF on October 16, 1990. Research activities from August 16 to October 16, 1989 were reported. The enclosed staff meeting report consists of 15 separate documents.

##### **E-2. In-Process Review**

Documents included in this In-Process Review were submitted to Dr. David Marlowe and Dr. Joel Teitelbaum upon their request. Included are supplemental materials to an oral presentation which the WRAIR/UF team made at WRAIR on November 2, 1990. Part of the materials in the In-Process Review were prepared to be used in an In-Process WRAIR Research Progress Report to the Community and Family Support Center. The full document is enclosed.

### **E-3. Minutes of the Commander's Joint Staff Meeting**

Otto von Mering, P.I., and Susannah Neal, Research Assistant, gave a presentation of preliminary research findings to the monthly Commander's Joint Staff Meeting on January 15, 1990. Enclosed are the minutes from that meeting with a brief summary of their presentation.

### **E-4 Preview and Selected Highlights from 3rd Annual Report**

This report was presented to Dr. David Marlowe on June 15, 1990. The items reported on include materials produced between October 24, 1989 and June 15, 1990. All of the pertinent documents have been reassembled for this final 3rd Annual Report.